

We claim:

1. Apparatus for verifying the interrelationship between dental casts of a patient's upper and lower teeth using a group of dental interocclusal records comprising:

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a mounting surface with a clamping system to hold one of the upper and lower dental casts in an anchored position in order to receive the other of the dental casts in a supported position with one dental interocclusal record of the group insertable between the upper and lower dental casts;

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an indexing system associated with the mounting surface for marking the dental cast in the supported position with at least three index marks for the one dental interocclusal record;

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whereby the interrelationship of the dental casts is considered accurate if a second dental interocclusal record of the group results in the same at least three index marks being made to the dental cast in the supported position.

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2. Apparatus as claimed in claim 1 in which the indexing system comprises at least three, spaced arms, each arm being pivotally mounted to the mounting surface and movable between a stowed position parallel to a side edge of the mounting surface and a working position upstanding from the mounting surface, and each arm including a marking guide for marking one of the at least three index marks on the dental cast in the supported position when the at least one arm is in the working

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position.

3. Apparatus as claimed in claim 2 in which the marking guide comprises a tubular member to slidably receive and guide a marking tool.

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4. Apparatus as claimed in claim 3 in which the marking tool is a pin member.

5. Apparatus as claimed in claim 3 in which the marking tool comprises a unit for generating a laser beam to indicate the index mark

6. Apparatus as claimed in claim 2 in which each arm includes a slot formed  
5 therein to slidably receive the marking guide.

7. Apparatus as claimed in claim 6 n which the mounting surface is generally triangular with three sides and each arm is positioned to extend along one of the sides of the mounting surface when the arm is in the stowed position.

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8. Apparatus as claimed in claim 1 in which the clamping system comprises a pair of spaced clamping blocks movable with respect to each other to grip and hold one of the upper and lower dental casts therebetween.

15 9. Apparatus as claimed in claim 8 in which at least one of the clamping blocks is mounted for movement along a clamping rail extending between the clamping blocks.

10. Apparatus as claimed in claim 9 in which one of the clamping blocks is fixed in position on the base and the other clamping block is movable

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11. Apparatus as claimed in claim 10 including a locking mechanism to lock the clamping block that is movable to the clamping rail.

12. Apparatus as claimed in claim 1 in which the clamping system comprises one  
25 of a magnet and a magnetically attracted member in the base to releasably engage a corresponding member in surface in the dental cast.

13. Apparatus as claimed in claim 2 including an additional mounting surface with a clamping system for receiving the other of the dental casts.

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14. Apparatus as claimed in claim 13 in which the additional mounting surface includes at least three indexing areas for receiving the at least three index marks.

15. Apparatus as claimed in claim 14 in which the additional mounting surface is generally triangular with three sides, and one of the at least three indexing area is formed on each side for marking with the marking guide.

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16. Apparatus for verifying the accuracy of the mounting of dental casts of a patient's upper and lower teeth using a group of dental interocclusal records after the dental casts have been initially mounted in a dental articulator comprising:

10 a mounting surface with a clamping system to hold one of the upper and lower dental casts in an anchored position in order to receive the other of the dental casts in a supported position with one of the dental interocclusal records of the group insertable between the upper and lower dental casts;

15 an indexing system associated with the mounting surface for marking the dental cast in the supported position with at least three index marks for each dental record;

whereby the mounting of the dental casts is considered accurate if a second  
20 dental interocclusal record of the group results in the same at least three index marks being made to the dental cast in the supported position.

17. Apparatus as claimed in claim 16 including an additional mounting surface with a clamping system for receiving the other of the dental casts.

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18. Apparatus as claimed in claim 17 in which the additional mounting surface includes at least three indexing areas for receiving the at least three index marks.

19. Apparatus as claimed in claim 18 in which the additional mounting surface is  
30 generally triangular with three sides, and one of the at least three indexing areas is formed on each side for marking with the marking guide.